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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/807,058	03/23/2004	Alain Yang	D0932-00411	4035

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EXAMINER

TORRES VELAZQUEZ, NORCA LIZ

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 08/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/807,058		YANG ET AL.	
	Examiner		Art Unit	
	Norca L. Torres-Velazquez		1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) 43-47 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-42 and 48-50 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>70806</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-50 have been considered but are moot in view of the new ground(s) of rejection.

a. The amendments to independent claims 1 and 27 now require the fibers to be in a blend versus in different layers as taught by YANG et al. Therefore the anticipation rejection of the claims over YANG et al. (US 2003/0049488) has been withdrawn.

b. The objection to claim 50 and the rejection of claims 1-42 and 48-50 under 35 U.S.C. 112, second paragraph has been withdrawn in view of Applicant's amendment to the claims.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 4, 14, 15, 16 and 40-42 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims above recite "textile fibers" in the body of the claim. There is insufficient antecedent basis for this limitation in the claim. They should refer to - - textile glass fibers - - for proper antecedent basis.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 9, 11-12, 14-15 and 48-50 are rejected under 35 U.S.C. 102(b) as being anticipated by BRANDON et al. (US 4,849,281).

BRANDON et al. discloses a glass fibrous mat that includes a blend of fibers comprising approximately 70-90%, by weight 6.5-13.0 micron in diameter wool fiber and 1.0-15 mm in length; and approximately 10-30%, by weight, 7.5-13.5 micron in diameter, 1/8 to 1/2 inch [3.3-12 mm] in length textile glass fibers bonded together with a resin, binder material comprising a melamine cross-linked styrene-butadiene resin. (Abstract; Col. 2, lines 37-44) The reference further teaches that blends of textile and wool glasses, which contain polyester, polyamide [nylon is a polyamide] or polyaramid fibers or combinations of these can also be utilized to optimize mat textile and compressibility strengths to meet specific requirements. (Col. 2, lines 45-49) The reference teaches that wool fibers are shorter and finer than textile fibers. (Col. 2, lines 64-65)

The Examiner equates the blend including polyamide fibers to that of the present invention. Based on Applicants definition of the dimensions of the claimed textile glass fibers and the claimed rotary glass fibers, the Examiner equates the wool glass fibers of the prior art to the presently claimed rotary glass fibers and the textile fibers are similar to those of the present invention.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 5-7, 9-12, 14-24, 27, 31-33, 35-38, 40-42 and 48-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over CHENOWETH et al. (US 4,751,134) in view of BRANDON et al. (US 4,749,281).

CHENOWETH et al. discloses a nonwoven matrix of mineral fibers and man-made fibers that provides a rigid but resilient product having good strength and insulating characteristics. The matrix consists of glass fibers and synthetic fibers such as nylon, which have been shredded and intimately combined with a thermosetting resin into a homogeneous mixture. The product may also include a skin on one or both faces thereof. (Abstract) Product densities in the range of from 1 to 50 pounds per cubic foot [$16-800 \text{ kg/m}^3$] are possible. (Col. 2, lines 34-35) The reference teaches that the glass fibers are preferably, substantially conventional virgin, rotary spun, fiberized glass fibers having a diameter in the range of from 3 to 10 microns with a length from approximately one half inch or less to approximately 3 inches. The synthetic fibers have lengths of from approx. one quarter inch to four inches and diameters of approximately 24 to 40 microns. (Col. 3, lines 35-66) The blanket will have a thickness of between about 1 and 3 inches. (Col. 4, lines 4-6) The resin teaches that the resin is in particle form. (Col. 4, lines 7-8)

CHENOWETH et al. fails to teach the inclusion of textile glass fibers as part of the total glass fiber content of their nonwoven.

BRANDON et al. discloses a glass fibrous mat that includes a blend of fibers comprising approximately 70-90%, by weight 6.5-13.0 micron in diameter wool fiber and 1.0-15 mm in length; and approximately 10-30%, by weight, 7.5-13.5 micron in diameter, 1/8 to 1/2 inch [3.3-12 mm] in length textile glass fibers bonded together with a resin, binder material comprising a

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melamine cross-linked styrene-butadiene resin. (Abstract; Col. 2, lines 37-44) The reference further teaches that blends of textile and wool glasses, which contain polyester, polyamide [nylon is a polyamide] or polyaramid fibers or combinations of these can also be utilized to optimize mat textile and compressibility strengths to meet specific requirements. (Col. 2, lines 45-49) The reference teaches that wool fibers are shorter and finer than textile fibers. (Col. 2, lines 64-65)

Since both references are directed to glass mats and the BRANDON et al. reference recognizes the inclusion of synthetic fibers to enhance the compressibility strength of the material the purpose disclosed by BRANDON et al. would have been recognized in the pertinent art of CHENOWETH et al.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the blend of CHENOWETH et al. and provide it with textile glass fibers at a concentration lower than that of the rotary glass fibers with the motivation of providing the material with more structural strength as the textile glass fibers do not bend as easily as rotary glass fibers. With regards to the dimensions of the textile glass fibers and the basis weight of the insulation product, it is the Examiner's position that it would have been obvious to one having ordinary skill in the art at the time of the invention to select the desired values for the textile glass fibers through the process of routine experimentation in order to arrive at values which offered the optimum insulation from the combination of CHENOWETH et al. and BRANDON et al.

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8. Claims 2-4, 8, 13, 28-30, 34 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over CHENOWETH et al. and BRANDON et al. as applied above, and further in view of BARGO et al. (US 6,099,775).

CHENOWETH et al. and BRANDON et al. are silent to the use of scrap nylon fibers, scrap rotary fibers and scrap textile glass fibers.

BARGO et al. discloses a thermal and acoustical insulation product prepared from a mixture of from about 20-80% fiberglass, 1-30% scrap nylon of less than 0.25 inches [6 mm] in length and a 5-35% thermo-setting resin. (Abstract) The fiberglass fibers have a diameter of from 5 to 20 microns and a length of from 0.25 to 5.00 inches [6-127mm]. The scrap nylon is less than 0.1875 inches in diameter [4.76 mm]. The reference further teaches that the resins may be in powder, latex, oil base or solvent base form, or they may be “liquid” polymers. The resin further teaches that the finished product will generally have a density of from 0.75-40 lbs/ft³ [12-640 kg/m³]. (Col. 1, lines 60 bridging to Col. 2, lines 1-24) The reference teaches the importance of providing an inexpensive insulation product using recycled raw materials that are economical in cost to produce. (Col. 1, lines 51-53) Since the reference is also directed to an insulation produce, the purpose disclosed by BARGO et al. would have been recognized in the pertinent art of CHENOWETH et al. and BRANDON et al.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the insulation material and provide it with recycled raw materials with the motivation of producing an economical insulation product as taught above by BARGO et al.

9. Claims 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over CHENOWETH et al. and BRANDON et al. as applied above, and further in view of YANG et al. (US 2003/0049488).

YANG et al. teaches the use of a thermoplastic polymer binder in an amount of about 4 to 24% of the insulation product. (Page 2, [0021]) CHENOWETH et al. discloses the claimed invention except that it uses a thermosetting resin binder instead of a thermoplastic binder, YANG et al. shows that thermoplastic binder is an equivalent structure known in the art. Therefore, because these two materials are art-recognized equivalents materials in the art of glass insulation materials at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute thermosetting for thermoplastic, particularly when the application does not require high temperatures.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

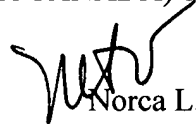
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Norca L. Torres-Velazquez whose telephone number is 571-272-1484. The examiner can normally be reached on Monday-Thursday 8:00-5:00 pm and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Norca L. Torres-Velazquez
Primary Examiner
Art Unit 1771

July 25, 2006